

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

CISCO SYSTEMS, INC., and
CISCO TECHNOLOGY, INC.,

Plaintiffs,

v.

TELCORDIA TECHNOLOGIES, INC.

Defendant.

C. A. No. 07-113 (GMS)

**CISCO SYSTEMS, INC. AND CISCO TECHNOLOGY, INC.'S
OPENING CLAIM CONSTRUCTION BRIEF ON
UNITED STATES PATENT NO. 5,142,622**

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NATURE AND STAGE OF THE PROCEEDINGS

On February 23, 2007, Plaintiffs Cisco Systems Inc. and Cisco Technology Inc. (collectively “Cisco”) sued Defendant Telcordia Technologies, Inc. (“Telcordia”) for infringement of U.S. Patent No. 5,142,622 (“the ’622 Patent”) and U.S. Patent No. 6,377,988 (“the ’988 Patent”). Pursuant to Paragraph 3 of the Court’s July 31, 2007 Scheduling Order (D.I. 13), on April 14, 2008, the parties filed a Final Joint Claim Chart, identifying a total of seven disputed claim terms in the ’622 and ’988 Patents that would require construction by the Court (D.I. 36). Since then, the parties have agreed to proposed constructions for six of the disputed claim terms, leaving only one claim term for construction by the Court.¹ The remaining dispute relates to the ’622 Patent.

SUMMARY OF THE ARGUMENT

For the ’622 Patent, the parties’ claim construction dispute is simple: whether the Court should adopt the express definition of the term “socket” from the specification (as Cisco contends), or whether it should instead import language from the specification relating to the development of a “socket” into the claim construction for that term (as Telcordia contends). For the reasons explained below, Telcordia’s attempt to import limitations from the specification is improper and the Court should instead construe the term in accordance with the meaning that is expressly provided in the specification of the ’622 Patent.

STATEMENT OF FACTS

The ’622 Patent describes and claims a “System for Interconnecting Applications Across Different Networks Of Data Processing Systems By Mapping Protocols Across Different

¹ A table summarizing Cisco’s and Telcordia’s competing constructions for the claim term in dispute is attached as Exhibit 1. A list of constructions of claim terms to which the parties have agreed is attached as Exhibit 2.

Network Domains,” or in other words, a system for allowing different data processing systems or machines using different protocols to communicate with one another automatically. ’622 Patent (A1-A15) at Abstract.

A. The Interconnection Problem

As the ’622 Patent explains, a problem in the art of data processing systems with multiple network domains was the inability of machines using one network protocol to automatically communicate with data processing systems using different network protocols. *Id.* at 1:24-45. At the time of the invention, several techniques existed for solving this problem, but each came with its own drawbacks. *Id.* at 1:46-3:13. As one example, the ’622 Patent describes the technique of reimplementing applications to work with different protocols. *Id.* at 1:46-56. Although this technique was known to solve the communication gap, it required that the program source code be changed, sometimes substantially. *Id.* The ’622 Patent also describes the technique of implementing the same protocol on both machines. *Id.* at 1:57-2:22. Once again, this technique had its drawbacks, namely that the reimplementation of a different protocol on one end of the network or the other was burdensome, particularly if the application was large or complex. *Id.*

Another known technique for interconnecting applications running on data processing systems, particularly relevant for the invention of the ’622 Patent, was an application program interface using “sockets.” *Id.* at 2:23-37. “Sockets” are objects that identify a communications end point in a network and can be connected with other sockets to allow for data processing systems on different ends of a network to communicate with one another. *Id.* As with other techniques for interconnecting data processing systems within networks, however, the use of sockets had its own drawbacks. Specifically, sockets were classified by domain and

thus did not allow for cross-domain connections. In other words, if an application program interface were to create a socket in a particular domain where a particular protocol is used (e.g., the Internet domain where the Internet Protocol (IP) is used), applications could only connect to other sockets in the same domain. *Id.* at 2:57-3:13. As the '622 Patent explains, there was a time when it was reasonable for sockets to connect only to other sockets in the same domain, as this simplified the program code at a time when only one useful domain existed. *Id.* However, the '622 Patent explains that, as other domains came into existence, cross-domain connections became increasingly important. Not only would these connections allow for communications (e.g., mail) among a variety of different domains, but they would allow for programs using different domains to communicate using existing communications networks. *Id.* In short, as the state of the art advanced, it became desirable to allow for cross-domain communications in a network. It is this problem that the '622 Patent was directed to solving. *Id.* at 3:15-39 (describing objects of the invention).

B. The Invention Of The '622 Patent

To allow for cross-domain connections using sockets, the '622 Patent describes a system and method for automatically routing connections between data processing systems. *Id.* at 3:40-4:30. According to the Summary of the Invention, if a socket in one domain is attempting to create a connection with a socket in another domain, the connection does not automatically fail as in the prior art. *Id.* Instead, one of two methods is implemented to allow for the cross-domain connection. In one method, a socket is created at the destination and a socket routing facility is invoked to facilitate communication between the cross-domain sockets. In the other method, a single function is implemented, which combines the function of creating a socket and invoking a routing facility. *Id.* In either case, a connection to a socket in a different

domain is made through an intermediate socket, which receives data from one end of the connection and immediately sends the data to the other end of the connection. *Id.* In the case where a routing facility is used to connect sockets using different protocols, the routing facility maps or translates between the domains, thus allowing a socket connection to be made between data processing systems using different domains.

C. The Asserted Claim

Cisco has asserted claim 7 of the '622 Patent against Telcordia in this litigation.

The parties dispute the proper claim construction for the term “socket” within claim 7:

7. A method for communicating between a first data processing system in a first network domain having a *socket* and a second data processing system in a second network domain, wherein said first network domain has a network protocol architecture different from said second network domain, said method comprising:

- establishing, by said first data processing system, a *socket* in said second data processing system in said second network domain; and
- invoking a routing facility to automatically establish a socket connection between said *socket* in said first data processing system and said *socket* in said second data processing system when said *socket* in said second data processing system is established and comprising means for mapping protocols between said first and second network domain;
- communicating over said socket connection between said *socket* in said first data processing system in said first domain and said *socket* in said second data processing in said second domain; and
- executing an application program on each of said first and second processing systems.

The claim construction dispute as to this term is addressed below.

ARGUMENT

A. Legal Standards For Claim Construction

“It is elementary that claim construction begins with, and remains focused on, the language of the claims.” *Biagro Western Sales, Inc. v. Grow More, Inc.*, 423 F.3d 1296, 1302 (Fed. Cir. 2005). The terms of a claim are generally given their ordinary and customary

meaning, which is the meaning that the terms would have to a person of ordinary skill in the art in question at the time of the invention. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (en banc). To discern this meaning, the claim terms “must be read in view of the specification, of which they are a part.” *Id.* at 1315. However, “although the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.” *Comark Comms, Inc. v. Harris Corp.*, 156 F.3d 1182, 1186-87 (Fed. Cir. 1998); *see also Phillips*, 415 F.3d at 1323. The claim construction process cannot be used to redefine the claims by inserting unclaimed elements, or in a way that contradicts unambiguous claim language. *Id.* at 1322-23. Adding limitations to the claims that are not required by the claim terms themselves is impermissible. *See, e.g., NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1310-11 (Fed. Cir. 2005). Ultimately, “the construction that [1] stays true to the claim language and [2] most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.” *Phillips*, 415 F.3d at 1316 (quoting *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)).

B. Disputed Claim Construction Of “Socket”

Claim Term	Cisco’s Proposed Construction	Telcordia’s Proposed Construction
“socket”	<p>an object that identifies a communication end point in a network²</p> <p>Col. 2, ll. 27-28</p>	<p>an application program interface (API) that was developed for the Berkeley version of AT&T’s UNIX operating system for interconnecting applications running on data processing systems in a network. It is an object that identifies a communication end point in a network, can be connected to other sockets, and hides the protocol of the network architecture beneath a lower layer</p> <p>Col. 2, ll. 23-37; June 29, 1990, Amendment at 11.</p>

The parties’ dispute as to the term “socket” is simple but fundamental: Should a passage from the specification describing the development and characteristics of a “socket” be imported into the claim construction for that term, or should the term be given the meaning that is expressly defined in the specification of the ’622 Patent? Telcordia proposes the former approach, Cisco the latter.

Specifically, Cisco proposes that the term “socket” be construed as “an object that identifies a communication end point in a network,” which is how it is defined in the patent specification:

The term socket is used to define an object that identifies a communication end point in a network.

² As part of an ongoing, weeks-long dialog on the parties’ proposed claim constructions, Cisco approached Telcordia with a compromise construction of “socket,” discussed below. Because Telcordia rejected Cisco’s compromise proposal, Cisco continues to offer its original proposed construction, which it believes is the most correct construction based on the express definition of the term “socket” in the specification of the ’622 Patent.

'622 Patent (A1-A15) at 2:27-28.³ Cisco proposes that the term simply be given this definition, as it is most closely in line with what a person of ordinary skill in the art reading the '622 Patent would understand the term "socket" to mean and what the patentee intended the term to mean.

In contrast, Telcordia proposes that the term "socket" be construed to include a variety of additional requirements relating to the historical development of and characteristics of the socket. These additional requirements include (1) that sockets were application program interfaces (APIs) developed for the Berkeley version of AT&T's UNIX operating system; (2) that sockets can be connected to other sockets; and (3) that sockets hide the protocol of the network architecture beneath a lower layer.

In support of its proposal that these limitations be imported into the claim language, Telcordia relies on the following passage from the '622 Patent specification:

The term "sockets" is an application program interface (API) that was developed for the Berkeley version of AT&T's UNIX¹ operating system for interconnecting applications running on data processing systems in a network. ***The term socket is used to define an object that identifies a communication end point in a network.*** A socket can be connected to other sockets. Data can go into a socket via the underlying protocol of the socket, and be directed to appear at another socket. A socket hides the protocol of the network architecture beneath a lower layer. This lower layer may be a stream connection model (virtual circuit), or a datagram model (packet), or another model.

¹ UNIX is licensed and developed by AT&T. UNIX is a registered trademark of AT&T in the U.S.A. and other countries.

'622 Patent (A1-A15) at 2:23-37. But a simple reading of this passage makes clear that the language that Telcordia now seeks to use to define "socket" is not a part of its definition at all. Rather, this passage (describing the Background of the Invention) provides a history of how sockets were developed and some of the characteristics that particular sockets could have. These

³ Emphasis supplied throughout, unless otherwise noted.

additional limitations go well beyond the actual definition of a “socket” set forth in the same passage and unduly limit the claim language based on a description of the Background of the Invention and the preferred embodiments.

In an effort to reach a compromise on the construction of this claim term, Cisco proposed to Telcordia that a “socket” be defined as “an application program interface (API) for interconnecting applications running on data processing systems in a network. It is an object that identifies a communication end point in a network, can be connected to other sockets, and hides the protocol of the network architecture beneath a lower layer.” Although Cisco believes that these constraints are not within the scope of the express definition set forth in the specification and that the most correct construction is that most faithful to that definition, Cisco proposed this compromise in an effort to eliminate the present dispute and thus obviate the need for any claim construction proceedings in this action.

Telcordia rejected even this compromise proposal. Instead, in a not-so-subtle attempt to unduly limit the claims to avoid infringement based on the Background of the Invention description of part of the historical development of sockets, Telcordia’s continues to attempt to import the limitation that a socket be an API developed for the Berkeley version of AT&T’s UNIX operating system into the claim construction for the word “socket” itself. As explained above, such a construction is not in line with the teachings of the specification and, to the contrary, completely ignores the clear statement in the ’622 Patent that the Berkeley version of the UNIX operating system is only a preferred embodiment. ’622 Patent (A1-A15) at Abstract (“In a preferred embodiment, the connection is automatically performed in the socket layer of the AIX operating system, or in the socket layer of other operating systems based upon the Berkeley version of the UNIX operating system.”). At a very minimum, Telcordia’s attempt

to limit the claims to this preferred embodiment should be rejected. *See, e.g., Phillips*, 415 F.3d at 1323 (“[P]ersons of ordinary skill in the art rarely would confine their definitions of terms to the exact representations depicted in the embodiments.”).

In short, Telcordia’s proposed claim construction is a classic maneuver to attempt to narrow the scope of the claims by improperly importing a number of limitations from the specification into the construction of the term “socket.” In contrast, Cisco’s proposed construction reflects the express definition of the term in the specification and therefore the understanding that would be attributed to that term by a person of ordinary skill in the art.

CONCLUSION

For the reasons stated herein, the Court should adopt Cisco’s proposed claim constructions for the disputed term “socket” in the ’622 Patent.

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May 1, 2008

CERTIFICATE OF SERVICE

I certify that on May 1, 2008 I electronically filed the foregoing with the Clerk of the Court using CM/ECF, which will send notification of such filing(s) to the following:

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I further certify that I caused copies to be served upon the following on May 1, 2008 in the manner indicated:

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Exhibit 1

DISPUTED CONSTRUCTIONS

Claim Term	Cisco's Proposed Construction	Telcordia's Proposed Construction
" <i>socket</i> "	an object that identifies a communication end point in a network Col. 2, ll. 27-28	an application program interface (API) that was developed for the Berkeley version of AT&T's UNIX operating system for interconnecting applications running on data processing systems in a network. It is an object that identifies a communication end point in a network, can be connected to other sockets, and hides the protocol of the network architecture beneath a lower layer Col. 2, ll. 23-37; June 29, 1990, Amendment at 11.

Exhibit 2

AGREED CONSTRUCTIONS

The parties have agreed on the following constructions:

United States Patent No. 6,377,988, Claim 1

1. “predetermined function” in claim 1 means “a function that has been determined beforehand.”
2. “group-specific instruction” in claim 1 means “an instruction in a format that is understood and can be processed by each network element of a specific group.”
3. “generic instruction” in claim 1 means “an instruction applicable to the group of elements.”

United States Patent No. 5,142,622, Claim 7

1. “network domain” in claim 7 means “the address family of a socket, and not a domain-naming domain. A domain naming domain is a concept of a related group of hierarchical addresses, wherein each part of the address is separated by a delimiter such as a period.”
2. “network protocol architecture” in claim 7 means “network domain.”
3. “data processing system” in claim 7 means “a system for executing application programs.”
4. “routing facility” in claim 7 means “a facility that establishes a socket connection between the sockets in the first and second data processing systems.”
5. “socket connection” in claim 7 means “a communication path between a first socket and second socket with an intermediate routing facility between the

first socket and the second socket, the routing of the communications being performed at the socket layer.”

6. “means for mapping protocols between said first and second network domain” in claim 7 is a means-plus-function limitation subject to 35 U.S.C. § 112(6). The claimed function is mapping protocols between the first and second network domain. The corresponding structure is software within socket layer 32 as described at 9:30-11:19, and hardware executing that software, and equivalents thereof.